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10/057,585	01/25/2002	Mikael Johansson	8194-580	1820

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EXAMINER	
PHAN, HUY Q	

ART UNIT	PAPER NUMBER
2685	7

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/057,585	JOHANSSON ET AL.	
	Examiner	Art Unit	
	Huy Q Phan	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Sheffer (US-4,891,650).

Regarding claim 1, Sheffer discloses in figures 1-3, a method of determining a location of a mobile terminal (12), comprising:

receiving, at the mobile terminal, respective signals from respective ones of at least three transmitters (fig. 4A and features 14-1 to 14-4) whose respective locations and respective transmit power levels are known (fig. 4A; col. 10, lines 28-65 and col. 11, lines 16-67), the respective locations of the at least three transmitters being different from each other (fig. 4A and col. 6, lines 16-23);

measuring respective strengths of the received signals (col. 6, lines 23-30); and

determining the location of the mobile terminal based on the respective strengths of the received signals, the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (fig. 4B and col. 10, lines 28-48).

Regarding claim 2, Sheffer discloses a method as recited in the rejection of claim

1, wherein determining the location of the mobile terminal based on the respective strengths of the received signals (figs. 4A and 4B), the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (col. 10, lines 28-48) comprises:

transmitting the respective strengths of the received signals to a data processing system (figs. 1 and 3, feature 20) , the data processing system being programmed with the respective locations of the at least three transmitters (figs. 5 and 6), and being further programmed with the respective transmit power levels of the at least three transmitters (col. 5, lines 1-38); and

determining, at the data processing system, the location of the mobile terminal based on the respective strengths of the received signals, the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (figs. 4-6 and col. 10, lines 5-48).

Regarding claim 3, Sheffer discloses a method as recited in the rejection of claim 1, wherein determining the location of the mobile terminal based on the respective strengths of the received signals (figs. 4A and 4B), the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (col. 10, lines 28-48) comprises:

receiving, at the mobile terminal, the respective locations of the at least three transmitters from the at least three transmitters (fig. 4A and features 14-1 to 14-4);

receiving, at the mobile terminal, the respective transmit power levels of the at least three transmitters from the at least three transmitters (col. 10, lines 5-31); and

determining, at the mobile terminal, the location of the mobile terminal based on the respective strengths of the received signals, the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (col. 10, lines 28-65 and col. 11, lines 16-67).

Regarding claim 4, Sheffer discloses a method as recited in the rejection of claim 1, wherein the respective ones of the at least three transmitters comprise respective ones of a plurality of mobile data base stations (fig. 4A and features 14-1 to 14-6), and wherein the received signals are cellular digital packet data (CDPD) signals (inherently to packet signal being received by digital receiver; see col. 6, line 61-col. 7, line 58).

Regarding claim 5, Sheffer discloses a method as recited in the rejection of claim 4, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-4), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein the one of the at least three cells is adjacent to other ones of the at least three cells (fig. 4A and features 14-1 to 14-4).

Regarding claim 6, Sheffer discloses a method as recited in the rejection of claim 4, wherein respective ones of the at least three transmitters are associated with

respective ones of at least three cells (fig. 4A and features 14-1 to 14-4), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein receiving, at the mobile terminal, the respective signals from the respective ones of the at least three transmitters whose respective locations and respective transmit power levels are known (col. 10, lines 28-65 and col. 11, lines 16-67) comprises: scanning respective CDPD channels that are associated with respective other ones of the at least three cells (col. 6, line 16-col. 7, line 58), which are adjacent to the one of the at least three cells (fig. 4A and features 14-1 to 14-4).

Regarding claim 7, Sheffer discloses a method as recited in the rejection of claim 4, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-8), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein other ones of the at least three cells (fig. 4A and features 14-1 to 14-8) comprise at least one cell that is adjacent to the one of the at least three cells (fig. 4A and features 14-1 to 14-6) and at least one cell that is not adjacent to the one of the at least three cells (fig. 3, features 14-1, 14-3 , 14-6 and col. 10, lines 28-65).

Regarding claim 8, Sheffer discloses a method as recited in the rejection of claim 4, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-4), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and

wherein receiving, at the mobile terminal, the respective signals from the respective ones of the at least three transmitters whose respective locations and respective transmit power levels are known (col. 10, lines 28-65 and col. 11, lines 16-67) comprises: scanning respective CDPD channels that are associated with respective other ones of the at least three cells (col. 6, line 16-col. 7, line 58), which comprise at least one cell that is adjacent to the one of the at least three cells (fig. 4A and features 14-1 to 14-6) and at least one cell that is not adjacent to the one of the at least three cells (fig. 3, features 14-1, 14-3 , 14-6 and col. 10, lines 28-65).

Regarding claim 9, Sheffer discloses in figures 1-3, a system for determining a location of a mobile terminal, comprising:

means for receiving, at the mobile terminal, respective signals from respective ones of at least three transmitters (fig. 4A and features 14-1 to 14-4) whose respective locations and respective transmit power levels are known (fig. 4A; col. 4, lines 38-41; col. 10, lines 28-65 and col. 11, lines 16-67), the respective locations of the at least three transmitters being different from each other (fig. 4A and col. 6, lines 16-22);

means for measuring respective strengths of the received signals (col. 6, lines 23-30); and

means for determining the location of the mobile terminal based on the respective strengths of the received signals, the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters(fig. 4B and col. 10, lines 28-48).

Regarding claim 10, Sheffer discloses a system as recited in the rejection of claim 9, wherein the means for determining the location of the mobile terminal based on the respective strengths of the received signals (figs. 4A and 4B), the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (col. 10, lines 28-48) comprises:

a data processing system programmed with the respective locations of the at least three transmitters (figs. 1 and 3, feature 20), and being further programmed with the respective transmit power levels of the at least three transmitters (figs. 5 and 6) and (col. 5, lines 1-38);

means for transmitting the respective strengths of the received signals to the data processing system (figs. 1 and 3, feature 20); and

means for determining, at the data processing system, the location of the mobile terminal based on the respective strengths of the received signals, the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (figs. 4-6 and col. 10, lines 5-48).

Regarding claim 11, Sheffer discloses a system as recited in the rejection of claim 9, wherein determining the location of the mobile terminal based on the respective strengths of the received signals (figs. 4A and 4B), the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (col. 10, lines 28-48) comprises:

means for receiving, at the mobile terminal, the respective locations of the at least three transmitters from the at least three transmitters (fig. 4A and features 14-1 to 14-4);

means for receiving, at the mobile terminal, the respective transmit power levels of the at least three transmitters from the at least three transmitters (col. 10, lines 5-31); and

means for determining, at the mobile terminal, the location of the mobile terminal based on the respective strengths of the received signals, the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (col. 10, lines 28-65 and col. 11, lines 16-67).

Regarding claim 12, Sheffer discloses a system as recited in the rejection of claim 9, wherein the respective ones of the at least three transmitters comprise respective ones of a plurality of mobile data base stations (fig. 4A and features 14-1 to 14-6), and wherein the received signals are cellular digital packet data (CDPD) signals (inherently to packet signal being received by digital receiver; see col. 6, line 61-col. 7, line 58).

Regarding claim 13, Sheffer discloses a system as recited in the rejection of claim 12, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-4), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and

wherein the one of the at least three cells is adjacent to other ones of the at least three cells (fig. 4A and features 14-1 to 14-4).

Regarding claim 14, Sheffer discloses a system as recited in the rejection of claim 12, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-4), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein the means for receiving, at the mobile terminal, the respective signals from the respective ones of the at least three transmitters whose respective locations and respective transmit power levels are known (col. 10, lines 28-65 and col. 11, lines 16-67) comprises: means for scanning respective CDPD channels that are associated with respective other ones of the at least three cells (col. 6, line 16-col. 7, line 58), which are adjacent to the one of the at least three cells (fig. 4A and features 14-1 to 14-4).

Regarding claim 15, Sheffer discloses a system as recited in the rejection of claim 12, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-8), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein other ones of the at least three cells (fig. 4A and features 14-1 to 14-8) comprise at least one cell that is adjacent to the one of the at least three cells (fig. 4A and features 14-1 to 14-6) and at least one cell that is not adjacent to the one of the at least three cells (fig. 3, features 14-1, 14-3 , 14-6 and col. 10, lines 28-65).

Regarding claim 16, Sheffer discloses a system as recited in the rejection of claim 12, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-4), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein the means for receiving, at the mobile terminal, the respective signals from the respective ones of the at least three transmitters whose respective locations and respective transmit power levels are known (col. 10, lines 28-65 and col. 11, lines 16-67) comprises: means for scanning respective CDPD channels that are associated with respective other ones of the at least three cells (col. 6, line 16-col. 7, line 58), which comprise at least one cell that is adjacent to the one of the at least three cells (fig. 4A and features 14-1 to 14-6) and at least one cell that is not adjacent to the one of the at least three cells (fig. 3, features 14-1, 14-3 , 14-6 and col. 10, lines 28-65).

Regarding claim 17, Sheffer discloses a computer program product (inherently to fig. 5 and fig. 3, box 34) and for determining a location of a mobile terminal, comprising:

a computer readable storage medium having computer readable program code embodied (col. 7, line 14-col. 8, lines 67) therein, the computer readable program code comprising:

computer readable program code (col. 7, lines 14-40) for receiving, at the mobile terminal, respective signals from respective ones of at least three transmitters whose

respective locations and respective transmit power levels are known, the respective locations of the at least three transmitters being different from each other;

computer readable program code (col. 7, lines 14-40) for measuring respective strengths of the received signals; and computer readable program code for determining the location of the mobile terminal based on the respective strengths of the received signals, the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters.

Regarding claim 18, Sheffer discloses a computer program product as recited in the rejection of claim 17, wherein the computer readable program code (col. 7, lines 14-40) for determining the location of the mobile terminal based on the respective strengths of the received signals (figs. 4A and 4B), the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (col. 10, lines 28-48) comprises:

a data processing system programmed with the respective locations of the at least three transmitters (figs. 1 and 3, feature 20), and being further programmed with the respective transmit power levels of the at least three transmitters (col. 5, lines 1-38);

computer readable program code (col. 7, lines 14-40) for transmitting the respective strengths of the received signals to the data processing system (figs. 1 and 3, feature 20); and

computer readable program code for determining, at the data processing system, the location of the mobile terminal based on the respective strengths of the received

signals, the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (figs. 4-6 and col. 10, lines 5-48).

Regarding claim 19, Sheffer discloses a computer program product as recited in the rejection of claim 17, wherein determining the location of the mobile terminal based on the respective strengths of the received signals (figs. 4A and 4B), the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (col. 10, lines 28-48) comprises:

computer readable program code (col. 7, lines 14-40) for receiving, at the mobile terminal, the respective locations of the at least three transmitters from the at least three transmitters (fig. 4A and features 14-1 to 14-4);

computer readable program code (col. 7, lines 14-40) for receiving, at the mobile terminal, the respective transmit power levels of the at least three transmitters from the at least three transmitters (col. 10, lines 5-31); and

computer readable program code (col. 7, lines 14-40) for determining, at the mobile terminal, the location of the mobile terminal based on the respective strengths of the received signals, the respective locations of the at least three transmitters, and the respective transmit power levels of the at least three transmitters (col. 10, lines 28-65 and col. 11, lines 16-67).

Regarding claim 20, Sheffer discloses a computer program product as recited in the rejection of claim 17, wherein the respective ones of the at least three transmitters

comprise respective ones of a plurality of mobile data base stations (fig. 4A and features 14-1 to 14-6), and wherein the received signals are cellular digital packet data (CDPD) signals (inherently to packet signal being received by digital receiver; see col. 6, line 61-col. 7, line 58).

Regarding claim 21, Sheffer discloses a computer program product as recited in the rejection of claim 20, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-4), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein the one of the at least three cells is adjacent to other ones of the at least three cells (fig. 4A and features 14-1 to 14-4).

Regarding claim 22, Sheffer discloses a computer program product as recited in the rejection of claim 20, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-4), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein the computer readable program code for receiving, at the mobile terminal, the respective signals from the respective ones of the at least three transmitters whose respective locations and respective transmit power levels are known (col. 10, lines 28-65 and col. 11, lines 16-67) comprises: computer readable program code for scanning respective CDPD channels that are associated with respective other ones of the at least three cells (col. 6, line 16-col. 7, line 58), which are adjacent to the

one of the at least three cells (fig. 4A and features 14-1 to 14-4).

Regarding claim 23, Sheffer discloses a computer program product as recited in the rejection of claim 20, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-8), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein other ones of the at least three cells (fig. 4A and features 14-1 to 14-8) comprise at least one cell that is adjacent to the one of the at least three cells (fig. 4A and features 14-1 to 14-6) and at least one cell that is not adjacent to the one of the at least three cells (fig. 3, features 14-1, 14-3 , 14-6 and col. 10, lines 28-65).

Regarding claim 24, Sheffer discloses a computer program product as recited in the rejection of claim 20, wherein respective ones of the at least three transmitters are associated with respective ones of at least three cells (fig. 4A and features 14-1 to 14-4), wherein the mobile terminal is located in one of the at least three cells (fig. 4A, feature 14-1), and wherein the computer readable program code for receiving, at the mobile terminal, the respective signals from the respective ones of the at least three transmitters whose respective locations and respective transmit power levels are known (col. 10, lines 28-65 and col. 11, lines 16-67) comprises:

computer readable program code (col. 7, lines 14-40) for scanning respective CDPD channels that are associated with respective other ones of the at least three cells (col. 6, line 16-col. 7, line 58), which comprise at least one cell that is adjacent to the

one of the at least three cells (fig. 4A and features 14-1 to 14-6) and at least one cell that is not adjacent to the one of the at least three cells(fig. 3, features 14-1, 14-3 , 14-6 and col. 10, lines 28-65).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Worthham (US-6,748,226) discloses a method for locating a mobile unit.

b) Grell et al. (US-5,815,538) discloses a method for locating a mobile unit.

c) Huensch et al. (US-4,475,010) disclose high density cellular mobile radio communication.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy Q Phan whose telephone number is 703-305-9007. The examiner can normally be reached on 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Urban F Edward can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phan, Huy Q AU: 2685 Date : Jul. 09, 2004

Quochien Bo Vuong 7/12/04

QUOCHIEN B. VUONG
PRIMARY EXAMINER